REMARKS

Pursuant to 37 C.F.R. § 1.131, Applicants respectfully request the Examiner to enter the enclosed affidavit for the above-referenced patent application. The affidavit establishes that the present invention is invented prior to March 29, 1999. Reconsideration of this application in light of the affidavit is respectfully requested.

Applicants believe that all claims, Claims 54-97, now pending in the present application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If there is a fee associate with this affidavit, please charge to White & Case LLP Deposit Account 23-1703. Applicants thank the Examiner for carefully examining the present application.

Respectfully submitted,

Dated: August 3, 2004

By: _____

James M. Wu Reg. No. 45,241
WHITE & CASE LLP
1155 Avenue of the Americas
New York, NY 10036
(650) 213-0300

E6523 Process

Emcore Process Printout

This process is stored in the file :
Directory : \\mat\sys\User\ech6\runs
Filename : E6523TJN.ERF

Total Run Time : 94.501 min

This printout contains the following fields :
Process Control Line Set Point
Process Control Line Command

Process comments :

NUC66 recipe: P drive-in instead of As drive-in
2P, 3P mixed platter with new pockets
BASELINE: e6517 WITH MODIFICATIONS AND SPECIFICS
Modifications: Baseline for TJN runs
Layer30, Time 1.9>0.95 min (InGaAlP BSF), InGaP base 10>6.5 min
Purpose: P drive-in with InGaP nucleation

Test: Surfscan, Polaron, PL, and V-probe

Emcore Process Printout

	Layer # 1	Layer # 2	Layer # 3	Layer # 4	Layer # 5
	4.000min	6.000min	6.000min	2.000min	2.000min
TMAl_7	400.00ccm I	400.00ccm I	400.00ccm V	650.00ccm V	852.00ccm V
TMAl#1 Pres_23	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R
TMAl#1_7 MoleFr	0.5700per I	0.5700per I	0.5700per I	0.5700per I	0.5700per I
TMGa#1_4	41.00ccm I	41.00ccm I	41.00ccm I	41.00ccm I	41.00ccm V
TMGa#1 Pres_20	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R
TMGa#2_5	140.00ccm I	140.00ccm I	140.00ccm I	140.00ccm I	140.00ccm I
TMGa#2 Pres_21	350.0Tor	350.0Tor	350.0Tor	350.0Tor	350.0Tor

E6523 Process

	R	R	R	R	R
TEGa_6	36.10ccm I	36.10ccm I	36.10ccm I	36.10ccm I	36.10ccm I
TEGa Pres_22	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R
AsH3#2_42	0.0ccm V	0.0ccm V	0.0ccm V	0.0ccm V	0.0ccm V
PH3_43	0ccm V	400ccm R	400ccm R	400ccm R	1800ccm R
CCl4_1	200.00ccm I	200.00ccm I	200.00ccm I	200.00ccm I	200.00ccm I
CCl4 Dil_57	200.0ccm R	200.0ccm R	200.0ccm R	200.0ccm R	200.0ccm R
CCl4 mix_58	133.00ccm R	133.00ccm R	133.00ccm R	133.00ccm R	133.00ccm R
CCl4 Pres_17	300.0Tor R	300.0Tor R	300.0Tor R	300.0Tor R	300.0Tor R

Emcore Process Printout

	Layer # 6 0.200min	Layer # 7 0.650min	Layer # 8 3.000min	Layer # 9 0.200min	Layer # 10 12.000min
TMAl_7	852.00ccm V	852.00ccm R	400.00ccm I	400.00ccm I	400.00ccm I
TMAl#1 Pres_23	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R
TMAl#1_7 MoleFr	0.5700per R	0.5700per R	0.6000per I	0.6000per I	0.6000per I
TMGa#1_4	41.00ccm V	41.00ccm R	100.00ccm V	100.00ccm V	100.00ccm R
TMGa#1 Pres_20	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R
TMGa#2_5	140.00ccm I	140.00ccm I	140.00ccm V	140.00ccm V	140.00ccm R
TMGa#2 Pres_21	350.0Tor R	350.0Tor R	350.0Tor R	350.0Tor R	350.0Tor R
TEGa_6	36.10ccm I	36.10ccm I	36.10ccm I	36.10ccm I	36.10ccm I

E6523 Process

TEGa Pres_22	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R
AsH3#2_42	0.0ccm V	0.0ccm V	0.0ccm V	1200.0ccm V	1200.0ccm R
PH3_43	2000ccm R	2000ccm R	400ccm R	400ccm R	0ccm V
CCl4_1	200.00ccm I	200.00ccm I	200.00ccm I	200.00ccm I	200.00ccm I
CCl4 Dil_57	200.0ccm R	200.0ccm R	200.0ccm R	200.0ccm R	200.0ccm R
CCl4 mix_58	133.00ccm R	133.00ccm R	133.00ccm R	133.00ccm R	133.00ccm R
CCl4 Pres_17	300.0Tor R	300.0Tor R	300.0Tor R	300.0Tor R	300.0Tor R

Emcore Process Printout

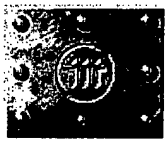
	Layer # 11 2.400min	Layer # 12 0.100min	Layer # 13 1.330min	Layer # 14 0.500min	Layer # 15 1.000min
TMAl_7	400.00ccm I	400.00ccm I	400.00ccm I	400.00ccm I	400.00ccm I
TMAl#1 Pres_23	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R
TMAl#1_7 MoleFr	0.6000per I	0.6000per I	0.6000per I	0.6000per I	0.6000per I
TMGa#1_4	100.00ccm R	54.17ccm V	54.17ccm R	54.17ccm V	54.17ccm R
TMGa#1 Pres_20	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R
TMGa#2_5	140.00ccm R	140.00ccm I	140.00ccm I	140.00ccm I	140.00ccm V
TMGa#2 Pres_21	350.0Tor R	350.0Tor R	350.0Tor R	350.0Tor R	350.0Tor R
TEGa_6	36.10ccm I	36.10ccm V	36.10ccm V	36.10ccm V	36.10ccm R
TEGa Pres_22	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R
AsH3#2_42	1200.0ccm R	400.0ccm R	400.0ccm R	400.0ccm R	400.0ccm R

E6523 Process

PH3_43	0ccm V	0ccm V	0ccm V	0ccm V	0ccm V
CCl4_1	200.00ccm V	200.00ccm V	200.00ccm V	200.00ccm V	200.00ccm R
CCl4 Dil_57	200.0ccm R	200.0ccm R	200.0ccm R	200.0ccm R	200.0ccm R
CCl4 mix_58	133.00ccm R	133.00ccm R	133.00ccm R	133.00ccm R	133.00ccm R
CCl4 Pres_17	300.0Tor R	300.0Tor R	300.0Tor R	300.0Tor R	300.0Tor R

Emcore Process Printout

	Layer # 16 1.000min	Layer # 17 0.100min	Layer # 18 9.000min	Layer # 19 3.000min	Layer # 20 2.000min
TMAl_7	400.00ccm I	400.00ccm I	400.00ccm I	400.00ccm V	650.00ccm V
TMAl#1 Pres_23	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R	250.0Tor R
TMAl#1_7 MoleFr	0.6000per I	0.6000per I	0.6000per I	0.6000per I	0.6000per I
TMGa#1_4	54.17ccm R	100.00ccm V	100.00ccm R	100.00ccm R	100.00ccm R
TMGa#1 Pres_20	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R	950.0Tor R
TMGa#2_5	140.00ccm V	140.00ccm V	140.00ccm R	140.00ccm R	140.00ccm R
TMGa#2 Pres_21	350.0Tor R	350.0Tor R	350.0Tor R	350.0Tor R	350.0Tor R
TEGa_6	36.10ccm R	36.10ccm I	36.10ccm I	36.10ccm I	103.00ccm I
TEGa Pres_22	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R	475.0Tor R
AsH3#2_42	1000.0ccm R	1200.0ccm R	1200.0ccm R	1200.0ccm R	1200.0ccm R
PH3_43	0ccm V	0ccm V	0ccm V	0ccm V	0ccm V
CCl4_1	50.00ccm	200.00ccm	200.00ccm	200.00ccm	200.00ccm



Joe Conklin /Emcore
05/05/2004 07:06 AM

To Paul Sharps/Emcore@Emcore
cc Rick Stall/Emcore@Emcore
bcc
Subject Re: Fw: GaInP2 Nucleation

Exploring - Runs E6426-6600

File Edit View Go Favorites Tools Help

Back Forward Up Cut Copy Paste Undo Delete Properties Views

Address D:\ECH6\Solar Cell Archives\Icarus\Runs E6426-6600

Folders

- Condensed Runs 2003
- Ech7
- ECR Recipes
- Elta Pins condenced runs 2001
- Emcore
- Golden
- Maintenance
- Motion
- Qs
- Recipes History
- Runs
- Solar Cell Archives
  - Aleruns
  - Dev_arc
  - Dev_CondensedRuns
  - EPVCondensedRuns
  - Icarus
    - Runs E6100- E6150
    - Runs E6150- E6200
    - Runs E6200-E6300
    - Runs E6300-E6375
    - Runs E6376-E6425
    - Runs E6426-6600
    - Runs-E6027-E6149
  - Icarus Condensed Runs
  - Retired Recipes
  - Saved
  - Special Teams
  - Yield enhancement
- Sys on 'Mfg' (E:)
- D_drive on 'Dcdxray' (F:)
- Aadatafolder on 'Eemxpert' (G:)
- Interdepartmental on 'Njsomsfs01' (I:)
- Sys on 'Mat' (M:)
- users on 'njsomsfs01.emcore.us' (P:)

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E6519tjn	18KB	ERF File	
E6520tjn	18KB	ERF File	
E6521tjn	18KB	ERF File	
E6522tjn	18KB	ERF File	
E6523tjn	19KB	ERF File	
E6524tjn	18KB	ERF File	
E6525tjn	18KB	ERF File	
E6527std	13KB	ERF File	
E6528std	18KB	ERF File	
E6529std	18KB	ERF File	
E6530tjn	18KB	ERF File	
E6531tjn	19KB	ERF File	
E6532tjn	19KB	ERF File	
E6533tjn	19KB	ERF File	
E6534tjn	18KB	ERF File	
E6535tjn	20KB	ERF File	
E6536tjn	18KB	ERF File	
E6537tjn	18KB	ERF File	
E6538plt	18KB	ERF File	
E6539plt	18KB	ERF File	
E6540std	13KB	ERF File	
E6541plt	18KB	ERF File	
E6542plt	18KB	ERF File	
E6543brg	6KB	ERF File	
E6544ugs	5KB	ERF File	
E6545ple	8KB	ERF File	
E6546ple	8KB	ERF File	
E6547ple	8KB	ERF File	
E6548ple	8KB	ERF File	
E6549ngp	9KB	ERF File	
E6550ngp	9KB	ERF File	
E6551ngp	9KB	ERF File	
E6552ngp	9KB	ERF File	
E6553ngp	7KB	ERF File	

217 object(s) 3.16MB (Disk free space: 0 bytes)

Start | New Memo - Lotus Notes | Exploring - Ech6 | Exploring - Runs E64...

Paul Sharps